REMARKS

At the time of the *Office Action*, claims 1–22 were pending. In the *Office Action*:

- Claims 1–3, 5–7, and 21 stand rejected under 35 U.S.C. § 103(a) as being obvious over Kerai (U.S. Patent App. Pub. No. 2002/0005707, hereinafter *Kerai*) in view of Lee (U.S. Patent Ser. No. 5,861,730, hereinafter *Lee*);
- Claim 4 stands rejected under 35 U.S.C. § 103(a) as being obvious over *Kerai*, in view of *Lee*, and further in view of Fischer (U.S. Patent Ser. No. 6,946,817, hereinafter *Fischer*);
- Claim 12 stands rejected under 35 U.S.C. § 103(a) as being obvious over *Kerai* in view of Chen (U.S. Patent Ser. No. 6,498,458, hereinafter *Chen*);
- Claims 13, 15-18, and 20 stand rejected under 35 U.S.C. § 103(a) as being obvious over *Kerai* in view of *Chen*, and further in view of *Fischer*.
- Claims 8-11 stand rejected under 35 U.S.C. 103(a) as being obvious over Wang (U.S. Patent App. Pub. No. 2005/0012850, hereinafter *Wang*) in view of *Lee*, and further in view of Watanabe (U.S. Patent App. Pub. No. 2003/0025823, hereinafter *Watanabe*);
- Claim 22 stands rejected under 35 U.S.C. 103(a) as being obvious over *Wang* in view of *Lee* and *Watanabe*, and further in view of *Kerai*;
- Claim 14 stands rejected under 35 U.S.C. § 103(a) as being obvious over *Kerai* in view of *Chen* and *Fischer*, and further in view of Odaohhara (U.S. Patent Ser. No. 6,424,123, hereinafter *Odaohhara*); and
- Claim 19 stands rejected under 35 U.S.C. § 103(a) as being obvious over *Kerai* in view of *Chen* and *Fischer*, and further in view of Hsu (U.S. Patent Ser. No. 6,798,173, hereinafter *Hsu*).

Applicants respectfully traverse the Examiner's rejection of claims 1–22. Herein, Applicants discuss the distinctions between the subject matter claimed and the art of record in the application.

The use of reference characters in describing the presently claimed elements below is for illustrative and exemplary purposes only, and is not to be construed as limiting absent an express indication for doing so.

Rejection of Claims 1–7 and 21 under 35 U.S.C. § 103(a)

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being obvious over *Kerai* in view of *Lee*.

1. The combination of Kerai and Lee fail to teach or suggest independent claim 1 at least since the combination fails to teach or suggest a main controller controlling overall operation of the electronic device, the main controller also outputting a battery type selection signal to a charger control portion. Consequently, the combination also fails to teach or suggest a charger control portion that receives a battery type selection signal from the main controller.

In the prior Office Action of March 9, 2009, the Examiner had rejected claim 1 under 35 U.S.C. § 103 over the combination of *Kerai* and *Nishimura*. In the present *Office Action*, the Examiner replaced the *Nishimura* reference with the *Lee* reference, thus rejecting claim 1 over the combination of *Kerai* and *Lee* (*Office Action*, pp. 2–4).

The Examiner acknowledged, on p. 4 of the present *Office Action*, that:

> Kerai does not disclose a battery type selection signal that is output from the main controller and received at an input of the charger control portion.

The Examiner then provided *Lee* as teaching the element lacking in *Kerai*, stating, on pp. 3–4:

> However, Lee discloses a charger control portion (a microcomputer 300, Figs. 3A-3B) electrically connected with the **main controller (battery type detecting unit 260, Figs. 3A-3B)**, the charger control portion (300) generating charge control signals (i.e. charging enable signal) at one or more

> outputs according to a battery type selection signal (i.e. battery type signal) that is output from the main controller (260) and received at an input of the charger control portion (300), the battery type selection signal distinguishing the battery type of a battery installed in the portable electronic device from a plurality of possible battery types that can be installed in the portable electronic device, wherein differing battery types have differing battery charge characteristics (the battery type detecting unit 260 detects the type of the battery and provides the microcomputer 300 outputs, based on the input signals, i.e. the charging enable signal CE for the charging current control unit 210 to conduct the charging operation according to the type of the battery pack 100) (col. 9, line 35 to col. 11, line 37, Lee).

The Examiner is thus equating *Lee*'s battery type detecting unit 260 with the claimed main controller. Applicants respectfully disagree with this characterization, because *Lee*'s battery type detecting unit 260 does not control anything—and particularly not the "overall operation of the portable electronic device" as does the main controller recited in claim 1.

The battery type detecting unit 260 of *Lee* "detects the type of the battery by receiving the cell composition information from the battery pack" (*Lee*, col. 9, lines 41–44). *Lee*'s battery type detecting unit 260 is merely a pair of resistors (R18 and R19), each of which is tied to a power supply (VDD) at one end and a switch (SW1 and SW2, respectively) at the other end to facilitate inputs on the microcomputer 300 to detect whether switches SW1 and SW2 are open or closed. As *Lee* teaches, "if the switch SW1 of the battery pack 100 is switched on, the microcomputer 300 perceives that Nickel Cadmium or Nickel Metal hydride battery is connected since the terminal (106a) voltage of the battery type detecting unit 260 is changed to a ground voltage level" (*Lee*, col. 9, lines 46–50). *Lee* further teaches, "if the switch SW2 of the battery pack 100 is switched from the position shown to an electrical on state, the microcomputer 300 perceives that a Lithium ion battery is connected for charging since the terminal (107a) voltage of the battery type detecting unit 260 is changed to a ground level" (*Lee*, col. 9, lines 53–58).

Therefore, *Lee*'s battery type detecting unit 260 in no way controls any operation related to overall operation of the portable electronic device—its purpose is simple: the detection of a battery type by pulling respective inputs to the microcomputer 300 up to a voltage of VDD when switches attached thereto are open (switched off), and dropping the voltage VDD across

resistors such that the respective inputs to the microcomputer 300 can be pulled down to ground voltage level when the switches attached thereto are closed (switched on). For this reason alone, it is not proper for the Examiner to read *Lee*'s battery type detecting unit 260 on the main controller of the present invention recited in claim 1.

MPEP § 2143.03, and appertaining case law, indicates that in establishing a *prima facie* case of obvious, all claim limitations must be considered. This section, citing *In re Wilson*, states:

> All words in a claim must be considered in judging the patentability of that claim against the prior art.

In the present case, the Examiner has ignored the "main controller controlling overall operation of the portable electronic device" language used in the claim when equating *Lee*'s battery type detecting unit 260 to the main controller which outputs the battery type selection signal received at an input of the charger control portion.

Furthermore, claim 1 recites "a battery type selection signal that is output from the **main controller**" in order to send information about the battery of the portable electronic device, whereas *Lee* teaches that the **battery pack** 100 sends the cell composition information to the battery type detecting unit 260 (see *Lee*, col. 9, lines 41–58). For this additional reason, the Examiner has improperly equated *Lee*'s battery type detecting unit 260 to the main controller as recited in the claim element "a battery type selection signal that is output from the main controller". Thus, the combination of *Kerai* and *Lee* also fails to teach or suggest a charger control portion that receives a battery type selection signal from the main controller.

For at least these reasons, Applicants assert that the Examiner has failed to establish a *prima facie* case of obviousness with respect to independent claim 1, and all claims that depend therefrom by virtue of their dependence. Applicants respectfully request that the rejection of claims 1–7 and 21 be withdrawn, and that claims 1–7 and 21 be allowed.

Rejection of Claims 12–20 under 35 U.S.C. § 103(a)

Claim 12 stands rejected under 35 U.S.C. § 103(a) as being obvious over *Kerai* in view of *Chen*.

2. The combination of Kerai and Chen fail to teach or suggest independent claim 12 since the combination fails to teach or suggest a USB battery charger enclosed within the second connector.

The Examiner admitted that "Kerai does not disclose a USB battery charger enclosed within the second connector" (*Office Action*, p. 7). However, the Examiner asserted that "*Chen* discloses a USB battery charger (a charging chamber 61, Fig. 2) enclosed within the second connector (an electric female connector 63, Fig. 2), ([0024] – [0028])" (*Office Action*, p. 7).

It is not clear to Applicants which elements disclosed by *Chen* the Examiner is equating with the second connector. In particular, *Chen* is an issued U.S. patent in which lines of the specification are identified by column and line number, not paragraph numbers. Therefore, it is unclear what text the Examiner is referring to by the reference "[0024] – [0028]". Also, Fig. 2 does not identify any element having the reference character "63", or any element described as "an electric female connector" using any other reference character. Applicants believe the Examiner is referring to the USB or PS/2 socket 64 in Fig. 3 as the referenced "electric female connector", at least because in column 2 lines 36-40, *Chen* discloses that "[t]he battery charger 6 further comprises a top insertion hole 63 adapted for receiving a receiver 2, an **electric female connector, for example, USB or PS/2 socket 64** embedded in the top insertion hole 63 and electrically connected to the internal circuit of the battery charger 6." Applicants respond to the Examiner's assertion in accordance with this interpretation.

Applicants disagree with the Examiner's assertion that "*Chen* discloses a USB battery charger enclosed within the second connector" (*Office Action*, p.7). First, Applicants disagree that *Chen* discloses a USB battery charger. As recited in claim 12, the USB battery charger includes a charging portion that adjusts "power received from the **USB receptacle**". At the very least, to meet the claim, a USB battery charger should receive power from a USB receptacle. *Chen*'s battery charger, in contrast, receives power for charging a battery from an AC adapter 4. For example, *Chen* teaches "**an AC adapter 4** is provided and adapted for converting AC power into the desired DC power for the battery charger 6" (*Chen*, col. 2, lines 43-45). Further, *Chen* also does not teach charging a device using a USB port, but instead teaches charging a device using charging contacts 62: "[w]hen charging the battery of the wireless mouse 5, the wireless

mouse 5 is inserted into the charging chamber 61 of the battery charger 6, enabling charging power to be transmitted from the charging contacts 62 of the battery charger 6 into the charging circuit of the wireless mouse 6" (*Chen*, col. 3, lines 1-7). At least because *Chen* does not teach charging a device using power received from a USB port or cable, or charging a device by providing power over a USB port or cable, Applicants submit that *Chen* does not disclose a USB battery charger.

Second, Applicants disagree that *Chen* discloses a "charger enclosed **within the second connector**" (*Office Action*, p. 7). The only function of an electric female connector disclosed by *Chen* is for communication between a receiver 2 and a computer 1 or 8 via a USB cable 65 (see, for example, *Chen* col. 2, lines 58-67). However, *Chen* does not disclose that the receiver 2 is charged. Instead, *Chen* discloses "charging the battery of the wireless mouse 5" using "**charging contacts 62** of the battery charger 6" (*Chen*, col. 3, lines 1-7). At least because *Chen*'s charging contacts 62 are separate and distinct from *Chen*'s electric female connector, and further because *Chen*'s charging contacts 62 couple with a different device (wireless mouse 5) for charging than the device (receiver 2) with which *Chen*'s electric female connector is coupled, *Chen* does not disclose a charger enclosed within the second connector of a USB cable. In fact, neither the second connector nor the USB cable disclosed by *Chen* is involved with "transfering power from a USB receptacle to a portable electronic device" as recited in claim 12.

Thus, rather than disclosing "a **USB** battery charger enclosed **within** the second connector" as claimed, *Chen* actually discloses an **AC** battery charger which is functionally **separate** from a second connector of a USB cable. Therefore, *Chen* does not make up for the deficiencies of *Kerai*, and the combination of *Chen* with *Kerai* fails to teach all the elements of claim 12. For at least these reasons, Applicants assert that the Examiner has failed to establish a *prima facie* case of obviousness with respect to independent claim 12, and all claims that depend therefrom by virtue of their dependence. Applicants respectfully request that the rejection of claims 12–20 be withdrawn, and that claims 12–20 be allowed.

Rejection of Claims 8–11 and 22 under 35 U.S.C. § 103(a)

Claim 8 stands rejected under 35 U.S.C. § 103(a) as being obvious over *Wang* in view of *Lee*, and further in view of *Watanabe*.

3. Wang is not prior art to the present invention, and therefore cannot be used as a basis for an obviousness rejection under 35 U.S.C. § 103(a)

Wang is not prior art to the present invention. *Wang* was filed in the U.S. on September 30, 2003. The present invention avails itself of its priority date of June 3, 2003, based on its Korean priority application number 2003-35559, and the claim of priority in this application has been perfected by the submission of a certified copy of the priority application, as acknowledged by the USPTO in the Office Action mailed on April 16, 2007.

Pursuant to the requirements of 37 C.F.R §1.55 and MPEP §201.15, Applicants are concurrently submitting (attached as an Appendix) a full translation of the Korean priority application along with a certification that the translation is accurate.

Applicants assert that the priority application contains sufficient disclosure supporting the independent claim that is sufficient to defeat the application of the *Wang* reference. Therefore, Applicants respectfully request that this 35 U.S.C. § 103 rejection be withdrawn from claim 8 and all of the remaining dependent claims that depend therefrom. Applicants submit that the other art of record in the application does not teach or suggest the subject matter claimed in independent claim 8. For these reasons, Applicants submit that claim 8 and those claims which depend therefrom are novel and nonobvious over the art of record. Applicants respectfully request that claims 8–11 and 22 be allowed.

Conclusion

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned.

Respectfully submitted,

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